IMPLEMENTING A SAFETY MANAGEMENT SYSTEM
INDUSTRY CASE STUDIES
TAUPO AIRPORT AUTHORITY

CIVIL AVIATION AUTHORITY OF NEW ZEALAND

CAVA
CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

SMS NEW ZEALAND

IMPLEMENTING A SAFETY MANAGEMENT SYSTEM
INDUSTRY CASE STUDIES
TAUPO AIRPORT AUTHORITY

The CAA SMS Case Study Series aims to provide an insight into selected aviation organisations that have started the journey of implementing a Safety Management System (SMS). These case studies have been developed through; interviews with key staff and crew, research into their safety and risk management policies, procedures and practices, and reference to the CAA SMS Forums held in 2013. The content was not sourced through documentation or activities relating to regulatory process.

DEVELOPED: JUNE 2014

SAFETY MANAGEMENT SYSTEMS

Since 2012, the Civil Aviation Authority of New Zealand have developed resources and guidance material to actively support the implementation of a Safety Management System (SMS) in all sectors of the aviation industry. This has included the Advisory Circular AC00-4 *Safety Management Systems*, the publication of the *CAA Safety Management System Implementation Strategy* and an Industry Resource Kit including four guidance booklets.

The Civil Aviation Authority defines an SMS as "a systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures". These case studies aim to demonstrate examples of this systematic approach. There are no confirmed Regulations requiring an SMS to be implemented as yet, however there is significant value in proactively doing so. These case studies highlight how proactive implementation is possible, and what the advantages are in doing so.

It's important to remember that the implementation of an SMS is a journey rather than a destination. Whilst aviation organisations should set objectives to measure success and progress, it also means every step taken along the way is valuable.

13 ELEMENTS OF A SAFETY MANAGEMENT SYSTEM

01	SAFETY POLICY AND ACCOUNTABILITY
02	COORDINATED EMERGENCY RESPONSE PLANNING
03	DEVELOPMENT, CONTROL AND MAINTENANCE OF SAFETY MANAGEMENT DOCUMENTATION
04	HAZARD IDENTIFICATION
05	RISK MANAGEMENT
06	SAFETY INVESTIGATION
07	MONITORING AND MEASURING PERFORMANCE
08	MANAGEMENT OF CHANGE
09	CONTINUAL IMPROVEMENT OF THE SMS
10	INTERNAL AUDIT PROGRAMME
11	MANAGEMENT REVIEW
12	SAFETY TRAINING AND EDUCATION PROGRAMME
13	COMMUNICATION OF SAFETY CRITICAL INFORMATION

TAUPO AIRPORT AUTHORITY:
AN OVERVIEW

BACKGROUND

Commencing operation in 1966, Taupo Airport is located on New Zealand's North Island, approximately 8km south of the Taupo town centre and next to New Zealand's largest lake, Lake Taupo. It is certificated under Civil Aviation Rules Part 139. The airport is operated by the Taupo Airport Authority under CEO Mike Groome, and is a joint venture between the Taupo District Council and the Government, with both parties holding a 50% interest. The Authority has two full time employees, and is directed by a Board consisting of five individuals, two councilors, one member of the business community, one member of 'Destination Great Lake Taupo', and one member of the safety committee. The Taupo Mayor sits on the Board as required.

Taupo Airport is the second busiest non-towered airport in the country. The airport receives scheduled regional flights, charter and private aircraft. Charter flights include a considerable number of International Corporate Jet traffic. The airport is also located within a Mandatory Broadcast Zone (MBZ) in uncontrolled (G) airspace with type C airspace starting at 6500 ft AMSL, which is under Christchurch Control.

MIKE GROOME
CHIEF EXECUTIVE OFFICER

In addition to his role as CEO, Mike Groome has held many roles over his 40 years in the aviation industry, including Part 135, Agricultural, EMS and Airport operations. He holds both Aeroplane and Helicopter pilot's licenses, and is currently the Chairperson of the CAA's Aviation Community Advisory Group. Mike has spent a number of years in aviation consultancy, specialising in Auditing, Risk Management and Certification. Mike also holds an Honorary Degree from the Federation Aeronautique Internationale in Lausanne, Switzerland, for services to General Aviation.

OPERATIONS

The stated objective of the Authority is to 'operate a successful, commercially viable business that provides land and infrastructure for the safe, appropriate and efficient air transport needs of the Taupo district'. The airfield is home to six fixed wing operators and four rotary wing operations and is serviced by Eagle Airways on behalf of Air New Zealand Link. With approximately 35,000 aircraft landings and take-offs each year, the Airport is the springboard for the largest commercial Tandem Skydive drop zone in the world, and offers a range of scenic flights by helicopters, floatplanes and light aircraft.

Rotary and Fixed Wing Operations at Taupo airport include the following industry participants:

- Farmers Air Ltd
- Izard Air
- Skydive Taupo
- Super Air
- Taupo Tandem Skydive
- Helicopter Services

- Helipro
- Lakeview Helicopters
- Rescue Helicopter service
- Rotary & Fixed Wing (Maintenance)

THE SAFETY MANAGEMENT SYSTEM CONTEXT

The Taupo Airport Authority have placed significant effort in developing a framework for the management of operational safety. Approximately eight years ago Taupo Airport was deemed to have some of the highest operational safety risks of all regional airports in the country. At that time, the Taupo District Council had greater control through a quasi-committee. As a result of the need to better govern safety and risk, the structure changed to its current form. Managing change and ongoing growth at the airport in a risk-based manner was vital. As part of the airport complying with all Part 139 requirements, the Airport Authority has established and maintained structured and coordinated management systems for some time, but in recent years they have proactively implemented a number of elements of an SMS.

Mike Groome explained that the SMS was designed to span all aspects of the airports' operations, and to provide assurance to other key stakeholders. As part of achieving this, the Taupo Airport Operational Safety Committee was formed over 6 years ago to facilitate open discussion on airport safety matters between the Taupo Airport Authority, its users, and other stakeholders.

Mike believes that SMS is as much about communication as it is about documenting what you do. He does not see SMS as being an onerous task that needs to be done in one hit. A business can move slowly into the process one step at a time allowing the personnel within the business to understand and appreciate what SMS will do for that business. Rather than making the process complicated, a simple approach is often the best and most effective way to achieve safety.

TAUPO AIRPORT AUTHORITY SAFETY MANAGEMENT SYSTEM: A CLOSER LOOK

The following information provides an overview of the Taupo Airport Authority's unique approach to 5 elements of their Safety Management System, in alignment with the 13 elements outlined in the CAA Advisory Circular *ACOO-4 Safety Management Systems.* Some of their successes to date and future enhancement initiatives have been highlighted via the following five select elements from the CAA SMS framework.

KEY FEATURES OF TAUPO AIRPORT AUTHORITY'S SMS:

- Making the necessary changes to the Board and Committees to be as effective as possible.
- Involving all possible stakeholders who talk openly about safety risks.
- Applying risk management principles and processes both reactively and proactively.
- Recognising areas for improvement and working to do so.

13 ELEMENTS OF A SAFETY MANAGEMENT SYSTEM

01	SAFETY POLICY AND ACCOUNTABILITY
02	COORDINATED EMERGENCY RESPONSE PLANNING
03	DEVELOPMENT, CONTROL AND MAINTENANCE OF SAFETY MANAGEMENT DOCUMENTATION
04	HAZARD IDENTIFICATION
05	RISK MANAGEMENT
06	SAFETY INVESTIGATION
07	MONITORING AND MEASURING PERFORMANCE
08	MANAGEMENT OF CHANGE
09	CONTINUAL IMPROVEMENT OF THE SMS
10	INTERNAL AUDIT PROGRAMME
11	MANAGEMENT REVIEW
12	SAFETY TRAINING AND EDUCATION PROGRAMME
13	COMMUNICATION OF SAFETY CRITICAL INFORMATION

ELEMENT 01: SAFETY POLICY AND ACCOUNTABILITY

01

In recent years, the Taupo Airport Board has evolved to be more capable of maintaining accountability for the safety and efficiency of all operations to and from the airport. Being an uncontrolled airfield, there is a strong need for the application of safety controls in order to oversee the management of day-to-day operational risks. This is in part facilitated through the escalation of safety information; for example, when the Authority develops a risk assessment (predominantly with the assistance of the Operational Safety Committee), it is then provided to the Board for review and strategic decision making.

Despite only one member at any time having any significant aviation background, the escalation of safety information to the Board has worked to ensure there is a level of governance and oversight that was not previously possible.

ELEMENT 02: COORDINATED EMERGENCY RESPONSE PLANNING

02

Given that it is relatively small, Taupo Airport relies on the emergency services in town. It is therefore important to ensure that regular interactions and exercises take place. A 'table top' exercise is undertaken annually, and then an on-airport exercise biennially. This assists in ensuring that the coordination of the different agencies remains effective. These exercises have involved scenarios including an accident involving a skydive aircraft, a breach of security with a person seizing and taking hostage an aircraft and passengers on the ramp, a volcanic event and an earthquake.

The Taupo Airport Authority CEO and Operations Manager also takes part in the town's Emergency Management Committee, which is also attended by the civil defence, police, fire, ambulance services and Health services. This allows them to remain informed of risks and changes that may be taking place.

03 ELEMENT 03:
SAFETY DOCUMENTATION

The Authority is currently in the process of developing their Exposition for submission to the CAA, which includes details of the safety and risk management policies, processes and activities in place.

The documentation of the airport's SMS is an area that the Authority staff are currently working on — it's often very common for organisations to have actively implemented many SMS activities without having as yet documented them. Luckily, documenting them is often the easy part when compared to the steps and effort required for effective implementation.

05 ELEMENT 05:
RISK MANAGEMENT

The application of risk management principles and processes is a large part of the way Taupo Airport Authority manages safety. One of the first steps taken was to seek external assistance in developing an appropriate risk matrix and other airport-specific risk tools. The application of risk management then could begin. One example is the conduct of a risk

assessment when a significant safety risk is first identified. The conduct of skydiving operations at the airfield is one such case. The Operational Safety Committee first discussed the safety implications of skydiving operations taking place in conjunction with other aviation operations. A formal risk assessment was conducted, which allowed for all of the possible risks to be documented in a transparent way, and for treatment strategies to be assigned to each risk. One of the outcomes of the risk assessment was to develop a Memorandum of Understanding between the skydiving operators, an airline that undertakes regular flights to and from the airport, and the Authority which outlines specific operational procedures that help to reduce the risks identified. For example, on all airline flights, the airline now makes a radio call inbound at 50nm, then at 25nm. At this point, skydiving operations cease until the inbound aircraft has landed. These same procedures are now used at other similar airports.

The CEO outlined that going forward, each section and activity on the airfield would be subject to an operational risk profile. This includes the proactive identification, assessment and treatment of risks associated with a specific activity or task. One of the advantages of this approach is that all safety risks across the airport's operations can be compared and contrasted equally.

ELEMENT 13:
SAFETY COMMUNICATIONS

13

One of the most influential and effective SMS activities undertaken is the Operational Safety Committee. This allows the Authority to gather representatives from the airport users and other operators together (including a parasail company on Lake Taupo and the Gliding Club situated five miles away) to openly discuss safety matters. One of the CAA's Aviation Safety Advisors also takes part in the meeting. The Chair of the Committee is a prominent aviation business owner who operates primarily from Taupo Airport. Approximately every 6 weeks, the Committee meets to discuss safety occurrence reports, as are any other identified risks and issues. This facilitates the Authority to address key risk areas. One prominent example of how the Committee actively contributed to the safety of the airport was to identify the safety risks associated with skydiving operations and other air operator traffic.

Overall, the most important aspect of safety communications have been those that have brought the users of the airport together. In addition to the Committee, this is facilitated through an email distribution list (which include all pilots that are based or use the airport as well), and other regular opportunities to talk about safety issues openly (including an airport user group meeting), and without fear of retribution.

ADVICE FOR OTHERS
IMPLEMENTING A SAFETY MANAGEMENT SYSTEM

Mike Groome, Taupo Airport Authority CEO, talked through his key pieces of advice for others in industry:

ON GETTING THE RIGHT PEOPLE INVOLVED…

It's critical that all possible stakeholders are engaged in the process of managing safety. This isn't necessarily only those directly involved in your operation, but anyone who is affected, or affects safe outcomes. Get them all in a room and talk!

ON RISK MANAGEMENT…

Be sure to identify, assess and consider treatments with others; don't do all this on your own.

ON SAFETY COMMUNICATIONS…

Take the time to find the most effective way of communicating with your stakeholders. This will differ according to the context, but don't be bound by the traditional approaches only, or be lulled into thinking that the' old ways' are actually still effective.

# SAFETY MANAGEMENT SYSTEMS: KEY STAFF VIEWPOINTS

JOHN FUNNELL – CHIEF EXECUTIVE AND CHIEF PILOT, HELICOPTER SERVICES

John Funnell is well known for his significant involvement in skydiving operations from Taupo Airport, which include his own safety and risk management processes and practices. In the context of the airport's SMS, John is the Chair of the Operational Safety Committee. He took on the role about two years ago, and has enjoyed being a part of the proactive management of safety risks for the benefit of all.

John recognises that the Committee's capabilities are reliant on the proactive reporting of safety risks and occurrences, which can then be used to fuel collective discussion and decision making. He is a believer in the approach that collective decision making is more effective than one person on their own, who rarely has all of the information to make the best possible decision. This includes the input from operators that aren't based at the airport, such as the gliding club and the parasailing operation on the lake, which in turn has helped to shape their own processes.

John's philosophy towards safety is that in order to gain the information you need to manage risks, it's important for all stakeholders to feel comfortable in reporting safety concerns and occurrences.
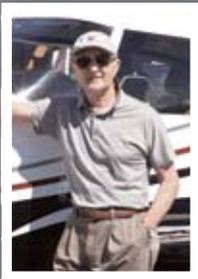
BARRY PAYNE – SAFETY CONSULTANT

Barry's military and civilian flying background (including working as Chief Pilot and consultant for significant helicopter operators locally and overseas) enabled him to be an early adopter of SMS, and has placed him in good stead for advising organisations including Taupo Airport on enhancing their own SMS. In 2011 he conducted a gap analysis which assisted in pinpointing areas for further improvement, and also areas that could be easily simplified (and hence more effective).

Overall, Barry believes that much of the reluctance staff and crew face in implementing an SMS is their perception that there's too much 'paperwork'. This misperception can be overcome with the right kind of training, especially that which is illustrative, and to ensure that organisations understand that the concept of SMS isn't new, and that in many different ways, they are already managing safety effectively.

Barry also urges operators to think beyond regulatory requirements alone, and to focus on some fundamentals in order to be effective. He has learned that it's essential for organisations to be well-governed in order to have an effective SMS, which in turn can then assure profitability; unless the business is organised or well run, the SMS is not likely to deliver the kind of result that is desired.

FOR MORE INFORMATION CONTACT CAA STAFF AT

Email: sms@caa.govt.nz

Web site: www.caa.govt.nz

CAA
CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

SMS NEW ZEALAND